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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,636	09/14/2001	James J. Croft III	T8534.CIP	7553

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Attn: Vaughn W. North
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EXAMINER

HARVEY, DIONNE

ART UNIT	PAPER NUMBER
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2643

8

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/954,636

Applicant(s)

JAMES J. CROFT

Examiner

Dionne N Harvey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-4, 10-14, 17-20 and 25-32 is/are allowed.
- 6) ☐ Claim(s) 5, 8, 9, 21, 23, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) 22 24 35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of species I of figures 5-7 in Paper No. 7 is acknowledged. Independent Claims 1,8,10,21,23 and 33, being readable on figures 5-7, are addressed in the detailed action, below. Since independent claims 6 and 15 are not illustrated by figures 5-7, they have not been examined further.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5,8 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, line 5 recites "another of said at least a second passive acoustic radiator...". The Examiner is unclear as to how one can have another at least a second. Correction is required. Examiner suggests that the claim be amended to recite "a fourth passive acoustic radiator..."

Regarding claim 8, in lines 15-17, the claim recites "...coupling each sub-chamber other than said first (n1) sub-chamber to a region outside each sub-chamber;..." This is misdescriptive since the applicant has failed to recite a means for intercoupling adjacent sub-chambers whenever $n > 3$. Therefore, when $n > 3$, the fourth

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sub-chamber is not coupled to a region outside itself via the second passive acoustic radiator. Correction is required.

Regarding claim 33, in lines 17-20, the claim recites "...for which all output of said vibratable diaphragm that is delivered to the region outside of said low range speaker system is filtered by all of said low pass acoustic filter structures." This is misdescriptive, since according to figures 5-7, Only sound emanating from the front of the vibratable diaphragm is filtered by all of said low pass acoustic filter structures **21**, **22** and **23**. While the sound emanating from the rear of the vibratable diaphragm is filtered by low pass acoustic filter structures **22** and **23**, alone.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 21, 23 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Gawronski et al. (US 5,174,721).

Regarding claims 21 and 23, As taught by the structure of the apparatus of the speaker enclosure, Gawronski teaches a method for configuring a low-range speaker system comprising the steps of:

a) configuring a low range speaker system to include multiple low pass acoustic filter structures (V1, V2, V3) to achieve at least a third order acoustic low pass character;

b) configuring a transducer (shown) with a vibratable diaphragm to be filtered by said low pass acoustic filters(V1, V2, V3) ; and

c) operating a low frequency passive acoustic radiator (P1) operating in parallel with said transducer (shown) such that said passive acoustic radiator (P1) is filtered by said low pass acoustic filter structures (V1, V2, V3) .

Since the Applicant has failed to recite which of the multiple low pass acoustic filter structures are used for filtering the output of the transducer and which of the multiple low pass acoustic filter structures are used for filtering the output of the passive acoustic radiator, the claims have been given the broadest interpretation by the Examiner.

Regarding claim 33, As best understood with regard to the U.S.C. 112 second paragraph rejection above, Gawronski appears to teach a method for configuring a low-range speaker system comprising the steps of:

a) configuring a low range speaker system to include multiple low pass acoustic filter structures (V1, V2, V3) to achieve at least a third order acoustic low pass character;

b) configuring a transducer (shown) with a vibratable diaphragm for which all output of said vibratable diaphragm that is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures (V1, V2, V3).

2. Claims 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Schreiber et al. (US 5,092,424).

Regarding claim 33, As best understood with regard to the U.S.C. 112 second paragraph rejection above, in figure 2, Gawronski appears to teach a method for configuring a low-range speaker system comprising the steps of:

a) configuring a low range speaker system to include multiple low pass acoustic filter structures (V1, V2, V3) to achieve at least a third order acoustic low pass character;

b) configuring a transducer (12) with a vibratable diaphragm for which all output of said vibratable diaphragm that is delivered to the region outside said low range speaker system is filtered by all of said low pass acoustic filter structures.

Regarding claim 34, shown in figure 13, Gawronski teaches configuring low pass acoustic filter structures to achieve at least a fourth order acoustic low pass characteristic (see sub-chambers V1, V2, V3, V4).

Allowable Subject Matter

3. Claims 22,24 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 1-4, 10-14, 17-20 and 25-32 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne N Harvey whose telephone number is 703-305-1111. The examiner can normally be reached on 9-6:30 M-F and alternating Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dionne Harvey



HUYEN LE
PRIMARY EXAMINER